

2 One Day Courses

NEXTGEN
Marine ENERGY

SOUTHAMPTON • 17 OCT 2023

NEXTGEN
Marine HYBRID

SOUTHAMPTON • 18 OCT 2023

Focus on Sub 24m Vessels

Relevant for 25m to 100m – Ports & Harbours

Relevant to Professional – Commercial – Military

End-user Organisations // Operators // Boat Builders
Equipment Manufacturers // Naval Architects // Safety Integrators
Training Organisations // Ports & Harbours // Maritime Legislators

Next Generation Energy – Power – Propulsion

Work Boats // Pilot Boats // Search & Rescue // Patrol Craft
Wind Farm Support // Survey Vessels // Police & Security
Offshore // Training & Charter // Superyacht & Tenders

Standard Rate for each course: £225 per day

Military / Government / Academia / SAR
Ports / UKHMA / UKMPA / British Marine
YBDSA / RINA / IMarEST - Discount Rate: £200 per day



Training Venue – Grand Harbour Southampton

For further information:

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www.nextgen-marine.com

COURSE:	NEXT GEN Marine ENERGY
08:30 – 09:00	Registration & Coffee
09:00 – 10:45	Session 1: OVERVIEW of Marine Power & Propulsion
	Introduction to Professional Marine Sectors: Understanding how energy use is evolving differently for boats versus ships.
	Sub IMO / Sub 24m Vessels: Evolution and characteristics of fast craft, workboats & RIBs.
	Modified ICE / Diesel – Petrol – Alternative Fuels: Why internal combustion engines suit the dynamic maritime workplace. Cleaner fuels.
	UK & EC & International Standards: Understanding the aims and objectives for marine transport. How different sectors are affected.
10:45 – 11:00	Break
11:00 – 12:45	Session 2: NEXT GENERATION Energy Opportunities & Challenges
	Re-Powering: How do we re-power our boat and fast craft fleets in a changing world?
	Battery-Electric / Charging: What parameters affect 100% battery-electric adoption in ports and at sea?
	Lithium Ion Batteries / Safety: Why li-ion is dominant and what can we expect in the near future?
	Hybrid Systems: Parallel or Series Hybrid - mechanical led or electrical led solutions?
12:45 – 13:30	Lunch
13:30 – 15:00	Session 3: EMERGING TECHNOLOGY Timelines & Viability for Sub 24m
	Hydrogen: As an energy carrier for fuel cell battery-electric. As a dual fuel in ICE. Methanol & Ammonia.
	Regional Availability / Fuel & Energy Security: Green Corridors & Ports. Considering how politics and instability are accelerating change.
	Energy Infrastructure / Technology Readiness Levels: Why system and infrastructure TRLs are behind vessel TRLs.
	Timelines & Next Steps: What can we specify now - by 2025 - between 2025 and 2030.
15:00 – 15:15	Break
15:15 – 16:00	Breakout Session / Q&A
END:	16:00 (UK)

John Haynes - NEXT GEN Training Developer

'Since 2022 - NEXT GEN Marine ENERGY has worked really well for significant maritime organisations. ALL decision makers should attend - including companies supplying technology and solutions. This course is in response to a need for simple, concise information that enables decision makers to plan for energy transition in a changing world. We have developed NEXT GEN Marine ENERGY with constantly evolving knowledge that everyone can benefit from. Our focus is on viable technology - available now or in the very near future.'

COURSE:	NEXT GEN Marine HYBRID
08:30 – 09:00	Registration & Coffee
09:00 – 10:45	Session 1: OVERVIEW of Marine Hybrid & Energy Systems
	Introduction to Professional Marine Sectors: How hybrid systems are evolving for different maritime sectors. Lessons from land transport.
	Duty Cycles of Sub 24m Vessels / Energy Density: Analysing potential hybrid systems - from workboats to fast craft. Realities of energy density.
	Hybrid using Modified ICE with Cleaner Fuels: Why internal combustion engines plus battery-electric suit multiple maritime roles.
	UK & EC & International - Drivers and Barriers for Hybrid: Understanding the aims and objectives for marine transport. How different sectors are affected.
10:45 – 11:00	Break
11:00 – 12:45	Session 2: BATTERY-ELECTRIC Opportunities & Challenges
	100% Battery-Electric: Where Battery-Electric fits best. Balancing Speed - Payload - Range. Reducing factors.
	Battery-Electric / Charging: What parameters affect 100% battery-electric adoption. Charging in home ports and away.
	Lithium Ion Batteries / Safety: Why Li-ion is dominant now. Pros & cons of various chemistries. What is coming next for marine.
	Energy Infrastructure / Technology Readiness Levels: Why charging and local grid network TRLs are behind vessel TRLs. A systems approach.
12:45 – 13:30	Lunch
13:30 – 15:00	Session 3: HYBRID Viability & Timelines for Sub 24m
	Re-Powering with Hybrid: Adapting and re-powering individual boats and fleets. Maintaining flexibility in a changing world.
	Hybrid Systems: Parallel or Series Hybrid - mechanical led vs electrical led solutions. Range extending.
	Hybrid Examples: Real world case studies of re-powering and new builds. Lessons learned onboard and onshore.
	Timelines & Next Steps: What can we specify now - by 2025 - between 2025 and 2030.
15:00 – 15:15	Break
15:15 – 16:00	Breakout Session / Q&A
END:	16:00 (UK)

John Haynes - NEXT GEN Training Developer

'New for 2023 - NEXT GEN Marine HYBRID brings together ICE with clean fuels, battery-electric and onshore infrastructure. The course builds on our experience since 2015 of running a series of hybrid workshops and conferences - plus working with literally hundreds of experts globally.

The aim of innovative hybrid systems is to enhance conventional power and propulsion.

Our objective has been to identify the potential of new technologies along with their readiness levels - plus how they fit with various maritime operating profiles and duty cycles.'